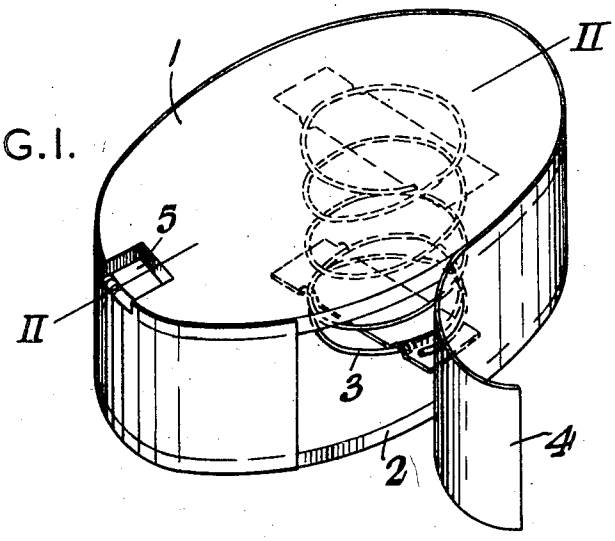
May 8, 1951 A. J. KIPLING 2,551,680

SOUND PRODUCING TOY

Filed May 5, 1948

FIG. 1.



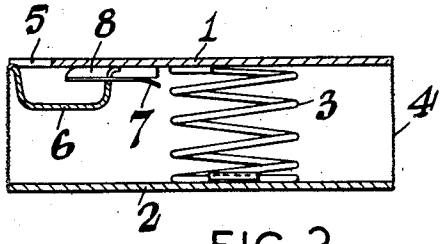


FIG. 2.

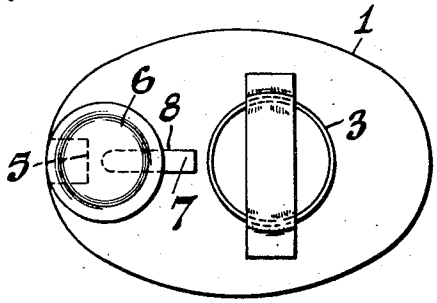


FIG. 3.

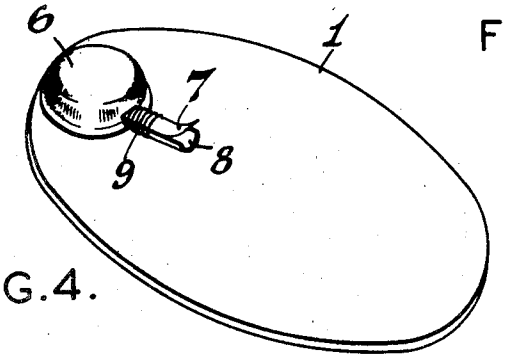


FIG. 4.

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SOUND PRODUCING TOY

Alexander John Kipling, Hampton Hill, England

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3 Claims. (Cl. 46—180)

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The invention relates to musical and other sound producing instruments, and is concerned more particularly with such instruments used as or comprised in toys.

A known sound producing instrument used in dolls and other toys comprises a spring loaded bellows the compression or expansion of which forces air through a reed tube communicating with an aperture in a substantially rigid end plate of the bellows. In such instruments external pressure is usually applied to the end plate of the bellows by finger and thumb, and if such pressure is applied directly over the aperture air cannot issue from or enter the aperture and the reed cannot operate. It is an object of this invention to provide a sound producing instrument of this type such that the reed can operate irrespective of where the external pressure is applied.

According to the invention in a sound producing instrument of the type comprising a casing compressible by externally applied pressure for forcing air through an aperture in the said casing, the said aperture is situated at least partly in a surface other than that to which the external pressure is applied.

In the type of instrument where the casing comprises a bellows joining two end plates, the aperture is situated at least partly in the plane of the edge of one of the said end plates.

Examples of the invention will now be described with reference to the accompanying drawings.

Figure 1 shows a perspective view of a sound producing instrument according to the invention and suitable for use in dolls and other toys.

Figure 2 is a section on the line II—II of Figure 1 on a smaller scale.

Figure 3 is a bottom plan of Figure 2 with base removed.

Figure 4 is a perspective view of the underside of the top plate of the instrument shown in Figure 1.

Referring to Figures 1 to 4 of the drawings the instrument comprises a spring loaded bellows having a top plate 1 and a bottom plate 2, both of cardboard, housing a compression spring 3 and held together by an encircling strip of rubber tape 4 sealed to the edges of the said plates. The tape is shown partially removed in Figure 1.

The top plate is provided with a hole 5 contiguous with the edge thereof. The underside of the said hole is completely covered by a domed cap 6 of cardboard the edges of which are sealed to the plate by glue, shellac, cement or the like. A brass reed 7 of known type, bound to a tube 8

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by thread 9, passes through a hole in the said cap and is sealed thereto in a like manner.

On pressure being applied to the top and bottom plates to compress the bellows, air is expressed from the bellows through the open end of the reed tube into the domed cap, and thence out of the hole 5. On the bellows being released the spring 3 expands, external air is drawn in through the hole 5 and, in passing through the tube 8 into the bellows casing, vibrates the reed 7 in known manner to produce a musical sound.

It will be observed that the operation above described is possible irrespective of where pressure is applied to the plates of the bellows. For example, even if the hand or the thumb is placed over the hole 5 to apply the pressure, air will still be able to enter and leave the bellows casing through that portion of the hole which is contiguous with the edge of the plate 1. When the instrument is incorporated in a doll or other toy, the reed will therefore be operated to produce the sound irrespective of the manner in which pressure is applied to the bellows. By reversing the reed, i. e. by placing the open end of the tube 8 inside the domed cap instead of outside the instrument will operate to produce the musical sound on compression instead of on expansion.

I claim:

1. A sound producing instrument of the spring bellows type, comprising an air-containing casing, a substantially rigid plate forming part of said casing, said plate being cut away at the periphery thereof to form an aperture extending into and through the plate and into the contiguous edge of the plate, a domed cap-like member secured to the under-side of said plate and covering the aperture, and a reed tube assembly held flat against the underside of the plate and so arranged that it penetrates said member and its inner end is spaced from the aperture, said cap-like member forming an air-tight seal around the reed tube assembly and allowing communication between the aperture and the inside of the casing only through said reed tube assembly.

2. A sound producing instrument according to claim 1, wherein said plate and the cap-like member are formed of cardboard, the reed-tube assembly and the said member being secured to the plate by an air-setting adhesive to form an efficient air-tight seal.

3. A sound producing instrument comprising an air-containing deformable casing, a substantially rigid plate forming part of said casing and cut-away to provide an aperture at a peripheral

part thereof, a member secured internally of the casing to isolate said aperture from the interior of said casing, and a reed assembly providing communication through said member and between the aperture and the interior of the casing, the open end of said reed assembly being located within said member but spaced from said aperture.

ALEXANDER JOHN KIPLING.

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